Flowtron® Tri Pulse™

Playbook

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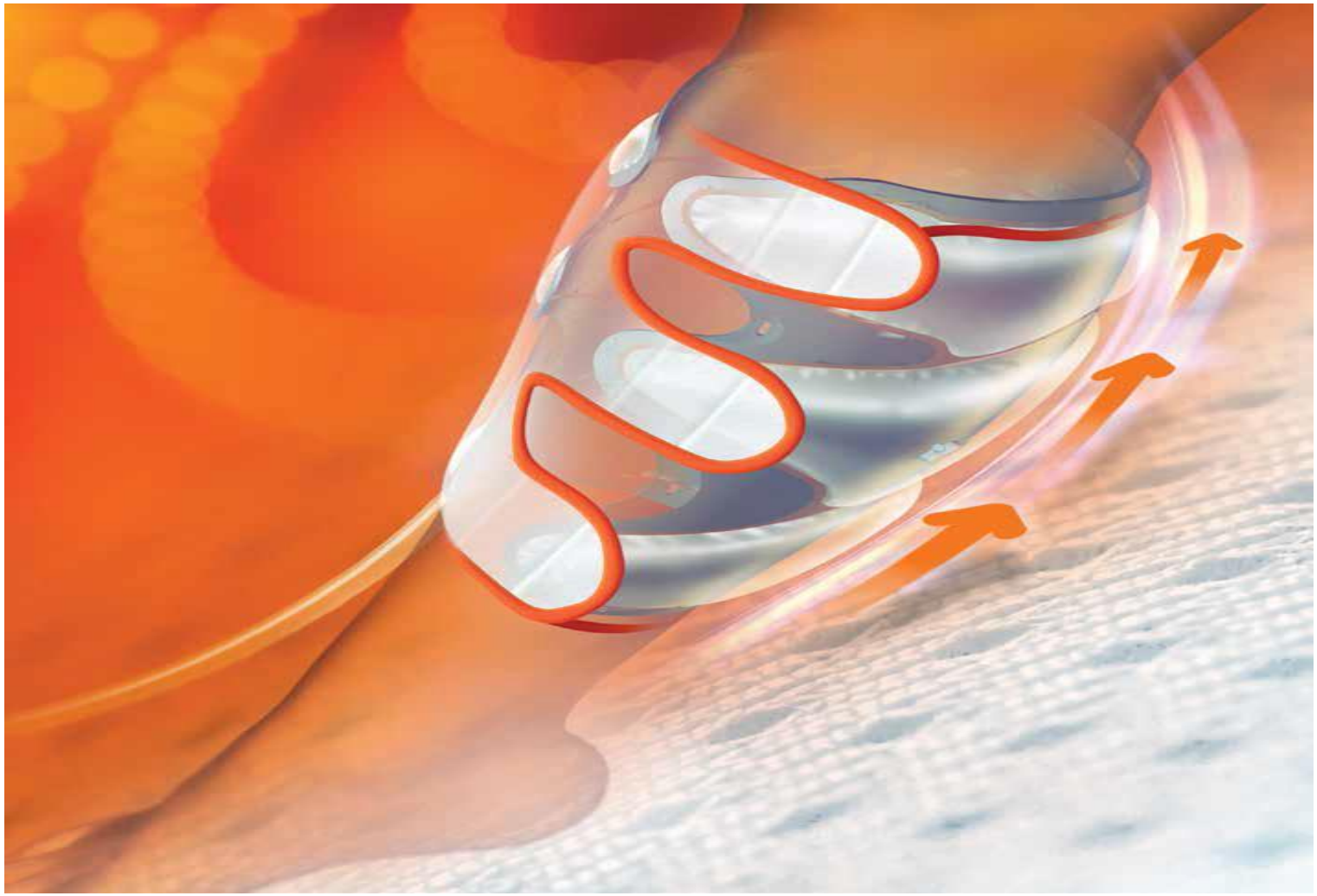

Lucy Stringer
Global Product Manager
July 2015

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Executive Summary

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The Flowtron® *Tri Pulse* ™sequential compression garment range differentiates the ArjoHuntleigh offer from competitors in the dynamic Intermittent Pneumatic Compression (IPC) market.

The *Flowtron Tri Pulse* system is a premium product range , reflecting the market position of the current ArjoHuntleigh portfolio, whilst delivering a competitive advantage in both established and emerging markets.

Problem To Solve

VTE – A Preventable Problem

By simulating the natural action of the ambulatory calf and/or foot pumps, IPC moves the blood in the deep veins of the leg, reducing the risk of Deep Vein Thrombosis (DVT) formation in hospitalised patients with reduced mobility, including those identified with high Venous Thromboembolism (VTE) or bleeding risk.

The *Flowtron Tri Pulse* sequential garment range delivers a simple, easy-to-use method of circulating blood in the deep veins of the legs, reducing venous stasis, preventing DVT formation, enhancing comfort and encouraging patient compliance.
Tri Pulse operates from ACS900 pump or a modified ACS800 pump. This playbook focuses on ACS900.

For further details refer to VTE Train The Trainer packs and VTE – Our Solution E Learning program.

1. Cohen AT, Tapson VF, Bergman J-F et al. Venous thromboembolism and prophylaxis in the acute hospital setting (ENDORSE study): A multinational cross-sectional study. Lancet. 2008; 371: 387-394.

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Our Solution

Introducing *Flowtron Tri Pulse*

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Both uniform and sequential IPC are proven to help prevent VTE when used as part of a prescribed care pathway[2].

The *Flowtron* ACS900 Active Compression System delivers IPC in both uniform and sequential modalities from one simple, easy to use pump; providing choice, convenience and flexibility.

A single pump for all active compression therapy aids asset management by reducing costs of:

- Maintaining and stocking multiple pump and garment variants.
- Delivery of training throughout the acute health care facility

2. ECRI (2009) intermittent pneumatic compression therapy. Health Devices April 209:120-123

What Is Different About *Tri Pulse*
Airflow Light fabric

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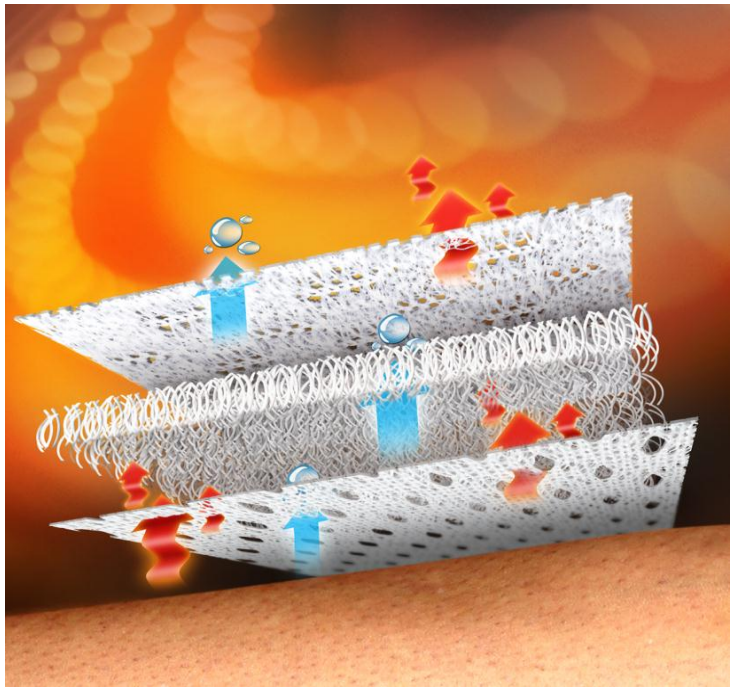
Airflow Light fabric*



2 layers bound together by small fibres provides a cushioned effect; micro vents help to prevent the build up of heat and moisture.

*patent pending

- Help keep patients cool and dry[3]
- Has the capability to rapidly dry[3]
- Very effective in transferring water vapour away form the patients skin[3]
- Low thermal ratings[3]
- Breathable[3]
- Smooth & Soft

3. Data on File

What Is Different About *Tri Pulse*

Bladder Design

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Unique, winged shaped PVC bladder

Provides graduated sequential compression

Promotes a comfortable and secure fit to patients leg

Operates from a modified ACS800 pump or ACS900 pump

Single tube in a new anterior position

Tube positioned away from bony prominence – helps reduce risk of pressure damage

Graduated pressure cycle

1. Distal – 45mmHg is delivered into Chamber 1.
2. Mid – Air flows into Chamber 2 at a reduced pressure of 35mmHg.
3. Proximal – Air flows into Chamber 3 at a reduced pressure of 25mmHg

What is Different abut *Tri Pulse*

Air inlet / outlets

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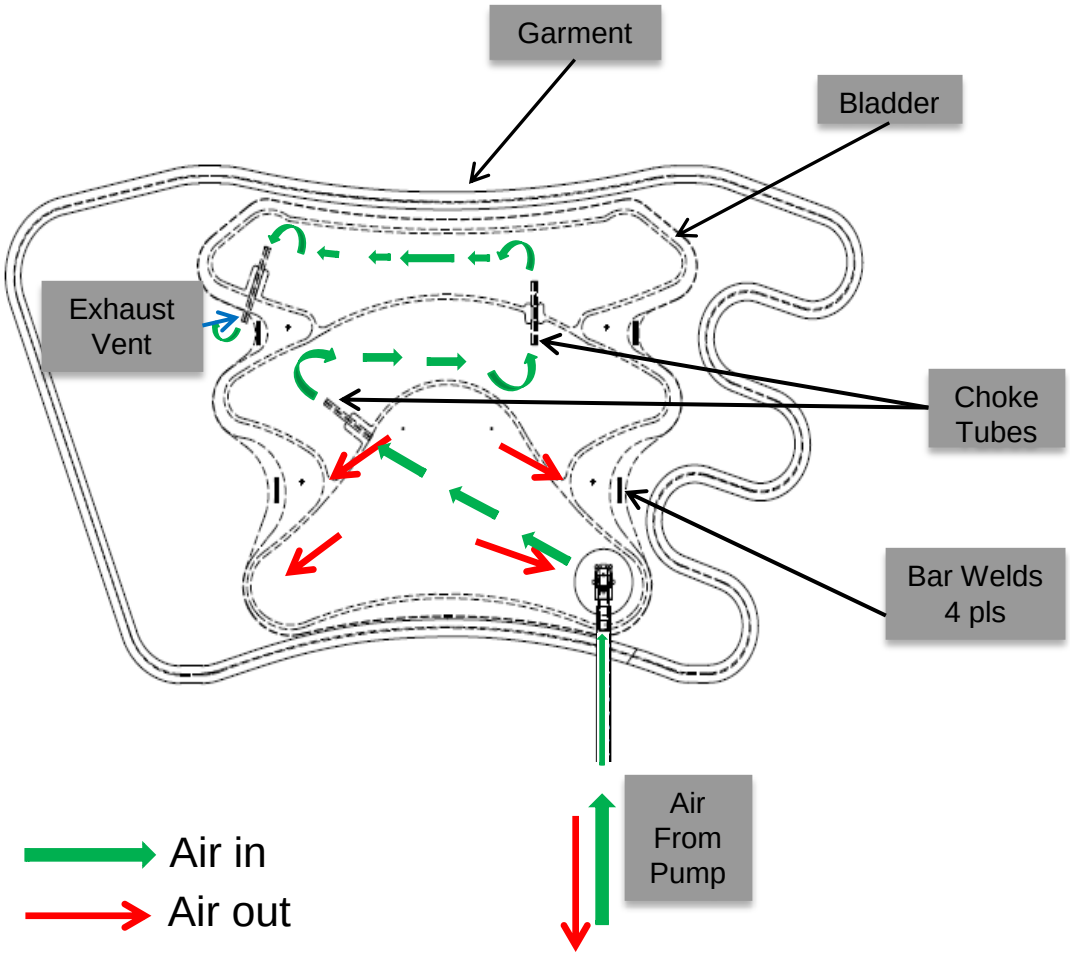

Air is vented out of the garment in 3 ways:

- Through the inlet tube and back out through the ACS900 pump
- Out of the four pin holes in chamber 1
- Out of the exhaust vent in chamber 3

Cycle timing matches Uniform:
1 minute cycle: 12 second inflate period, 48 second deflate period

* Patent Pending

12 May 2022

To Whom It May Concern:

Flowtron Tri Pulse Garments – Intermittent Pressure Compression Sequential Profile - Explanation

Flowtron Tri Pulse garments are used in conjunction with the Flowtron ACS900 pump to deliver Intermittent Pressure Compression (IPC). The Tri Pulse garments are constructed with a three chamber bladder and inflates in a sequential profile to generate:

- 45 mm Hg pressure in the first distal chamber.
- 35 mm Hg pressure in the middle chamber
- 25 mm Hg pressure in the last proximal chamber

Technology:

Other manufacturers in the field use three separate external chamber inflation tubes to create the IPC sequential profile where the control and rate of inflation of each of the bladder chambers is controlled purely from the pump. However. Arjo use different technologic solution to deliver an effective IPC sequential profile and are able to eliminate 3 external chamber connecting tubes.

Arjo technologic solution consists of:

- Tri Pulse garments with a single inlet connection tube to the distal chamber and three internal interconnecting tubes between the three chamber bladder. The volumes of each of the chambers and size and dimensions of each of the interconnecting tubes operate in concert using fluid dynamics to regulate the rate of inflation in each of the chambers and the peak inflation achieved in each chamber.
- During the inflation cycle the back pressure in the distal chamber is passively communicated back through the inlet tube to the Flowtron ACS900 pump and is detected so that programmed adjustments in pump fill rate are made during the cycle to ensure the Tri Pulse garment delivers the indicated 45, 35 and 25 mm Hg sequential pressure profile over the three chamber bladder.

Arjo technologic solution operated on all sizes of Tri Pulse garments via the design specification of the different sized three chamber bladders and the fluid dynamics that result from the designs.

See page 2 for Line Drawing of Tri Pulse Calf and Thigh Garment and generic position of the inlet connection and each of the interconnecting tubes the regulate the inflation fluid dynamics.

David Moynham
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ArjoHuntleigh AB

www.arjo.com

Arjo AB own legal entity ArjoHuntleigh AB which operates in entirety as the legal manufacturer for medical devices

Line Drawing of Tri Pulse Calf and Thigh Garment.

Drawing indicates position of inlet connection and the three internal interconnecting tubes between bladders which operate in conjunction with the Flowtron ACS900 pump to regulate the rate and peak value of pressures in the three bladders.